KASATKINA, I.D.

Relation between the morphology of variants of Aspergillus nidulans deficient in amino acids and the composition of the medium. Mikrobiologiia 29 no. 4:501-504 Jl-Ag '60. (MIRA 13:10)

1. Institut mikrobiologii AN SSSR.
(ASPERGILLUS) (AMINO ACIDS)

KASATKINA, I. D.

Effect of some amino acids on the growth of a mutant Aspergillus niger-T_1 and the synthesis of acids by it. Mikrobiologiia 30 no.3:447-452 My-Je '61. (MIRA 15:7)

1. Institut mikrobiologii AN SSSR.

(ASPERGILLUS NIGER) (AMINO ACIDS)

KASATKINA, I.D.; ZHELTOVA, Ye.T.

Cystine reductase activity in Aspergillus niger. Mikrobiologiia 32 no.6:973-980 N-D '63 (MIRA 18:1)

1. Institut mikrobiologii An SSSR.

IMSHENETSKIY, A.A.; KASATKINA, I.D.; AVERBUKH, Z.K.; TUPITSYNA, R.S.; IVANOVA, A.A.; SHERSTYUK, I.A.

Production of proteolytic enzymes by Bacillus mesentericus and their use for regeneration of triacetate motion-picture films. Mikrobiologiia 33 no.4:719-726 Jl-Ag '64. (MIRA 18:3)

1. Institut mikrobiologii AN SSSR i Shostkinskiy khimicheskiy zavod.

KASATKINA, I.D.; ZHELTOVA, Ye.G.

Methods of selecting Aspergillus niger mutants with an altered capacity to synthesize organic acids. Mikrobiologiia 34 no.3:511-518 My-Je '65. (MIRA 18:11)

1. Institut mikrobiologii AN SSSR.

KASATKINA, I.L.; KNIZHNIKOV, V.A.

Distribution of enterotoxic staphylococcal strains in Alma-Ata.
Gig. i san. 21 no.9:96 S '56. (MLRA 9:10)

1. Iz Kazakhskogo instituta epidemiologii mikrobiologii i gigiyeny.
(ALMA-ATA--STAPHYLOCOCCUS)

KASATKINA, I.L.

KNIZHNIKOV, V.A.; KASATKINA, I.L.

Biological tests for enterotoxin. Lab.delo 3 no.4:35-37 Jl-Ag '57.
(MLRA 10:8)

1. Iz Kazakhskogo instituta epidemiologii, mikrobiologii i gigiyeny (rukovoditel' raboty - dotsent G.F.Portian)

(TOXINS AND ANTITOXINS)

KNIZHNIKOV, V.A.; KASATKINA, I.L.

Criteria of pathogenicity and enterotoxism of staphylococci. Zhur. mikrobiol.epid. i immun. 28 no.1:80-84 Ja '57. (MIRA 10:3)

1. Iz Kazakhskogo instituta epidemiologii, mikrobiologii i gigiyeny.

(MICROCOCCUS PYOGENES,
pathogen. & enterotoxism (Rus))

KASATKINA, I.L., aspirant

Clinical aspects of Q fever. Zdrav. Kazakh. 18 no. 2:23-29 '58. (MIRA 13:8)

1. Iz kafedry infektsionnykh bolezney Kazakhskogo gosudarstvennogo meditsinskogo instituta.
(Q FEVER)

KASATKINA, I. L.: Master Med Sci (diss) -- "The clinical aspects and diagnosis of Q-fever". Alma-Ata, 1959. 17 pp (Kazakh State Med Inst), 300 copies (KL, No 16, 1959, 110)

BEKLEMISHEV, N.D.; SHNYREVA, Ye.A.; KASATKINA, I.L.

Corticosteroids in the treatment of brucellar arachnoiditis. Trudy Inst.kraev.pat.AN Kazakh SSR 12:220-225 '62. (MIRA 15:11)
(CORTICOSTEROIDS) (BRUCELLOSIS) (BRAIN—DISEASES)

KASATKINA, Irma L'vovna; ANTONOV, B.N., red.; PARAKHINA, N.L., tekhn. red.

[Q fever] Ku-likhoradka. Moskva, Medgiz, 1963. 206 p. (MIRA 16:12)

(Q FEVER)

AVGUSTINIK, A.I.; PETROVA, V.Z.; KASATKINA, I.M.

Effect of a-Al_2O_2 addition on the physicomechanical properties of feldspar porcelain-type glass phases. Trudy LTI no.59: 40-46 '61. (MIRA 17:9)

3(5) PHASE I BOOK EXPLOITATION SOV/1897

Vsesoyuznyy neftyanoy nauchno-issledovatel'skiy geologorazvedochnyy Institut.

O proiskhozhdenii nefti v kamennougol'nykh i permskikh otlozheniyakh Volgo-Ural'skoy oblasti; sbornik statey (Origin of Petroleum in the Carboniferous and Permian Sediments of the Volga-Ural District; Collection of Articles) Leningrad, Gostoptekhizdat, 1958. 283 p. (Series: Its: Trudy, vyp. 117) Errata slip inserted. 1,500 copies printed.

Ed.: Kinaidy L'vovny Maynin; Exec. Ed.: G.A. Dayev; Tech. Ed.: I.M. Gemad'yeva.

PURPOSE: This book is intended for geologists and geochemists, particularly those interested in questions dealing with the origin, development, and structure of oil deposits.

COVERAGE: This collection of articles deal with the Carboniferous and Permian sediments of the Volga-Ural district and methods of determining possible petroleum source-beds. The lithologic and geochemical characteristics of the sediments are discussed as are the conditions of oil deposition. The author thanks the following geologists working in the Second Baku area: A.Z. Dubinin, L.P. Zadov, K.B. Ashirov, I.L. Khanin, A.M. Mol'nikov, S.P. Yegorov, and I.A. Shpil'man. Further thanks are extended to Professor N.P. Dvali for his advice and encouragement. References accompany each article.

Origin of Petroleum (Cont.) SOV/1897

Petrova, Yu.N., I.P. Karpova, I.P. Kasatkina. Organic matter in the Upper Paleozoic Beds of the Volga-Ural Region 115

Kotina, A.K., Ye.M. Chikhacheva. Certain Characteristics of the Oils in the Volga-Ural Region 151

Denenkova, P.Ya., L.N. Zakharenkova, and A.P. Surbatskaya. The Relationship Between Vanadium and Nickel and the Components of the Oils of the Volga-Ural Region 186

Kinakova, T.L., and N.A. Losera. The Study of Microflora in the Oil Deposits of the Second Baku 213

Zavadskiy, V.A. Certain Regularities in the Distribution of Oils in the Volga-Ural Region 222

Porner, V.M. Certain Features of the Development of the Structural-tectonic Pattern in the Middle and the Upper Paleozoic of the Volga-Ural region and the Western Slope of the Urals 234

Card 3/5

Origin of Petroleum (Cont.) SOV/1897

Maynin, Z.L. The possibility of outlining the oil-bearing units in a Great section of the Carboniferous and Permian of the Volga-Ural Region 252

AVAILABLE: Library of Congress

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6-22-59

MALINA, M.T.; KASATKINA, K.S.

Vaccine and mineral water containing sulfur in the treatment of brucellosis in health resort. Sovet. med. no.1:23-28 Jan 52. (CIML 21:4)

1. Of the Brucellosis Division (Scientific Supervisor--Prof. G.S. Dem'yanov) of the Sanatorium of Krasnodar Kray Administration of Goryachiy Klyuch Health Resort.

MALINA, M. T. ; KASATKINA, K. S.

Mineral Waters, Sulfurous - Therapeutic Use

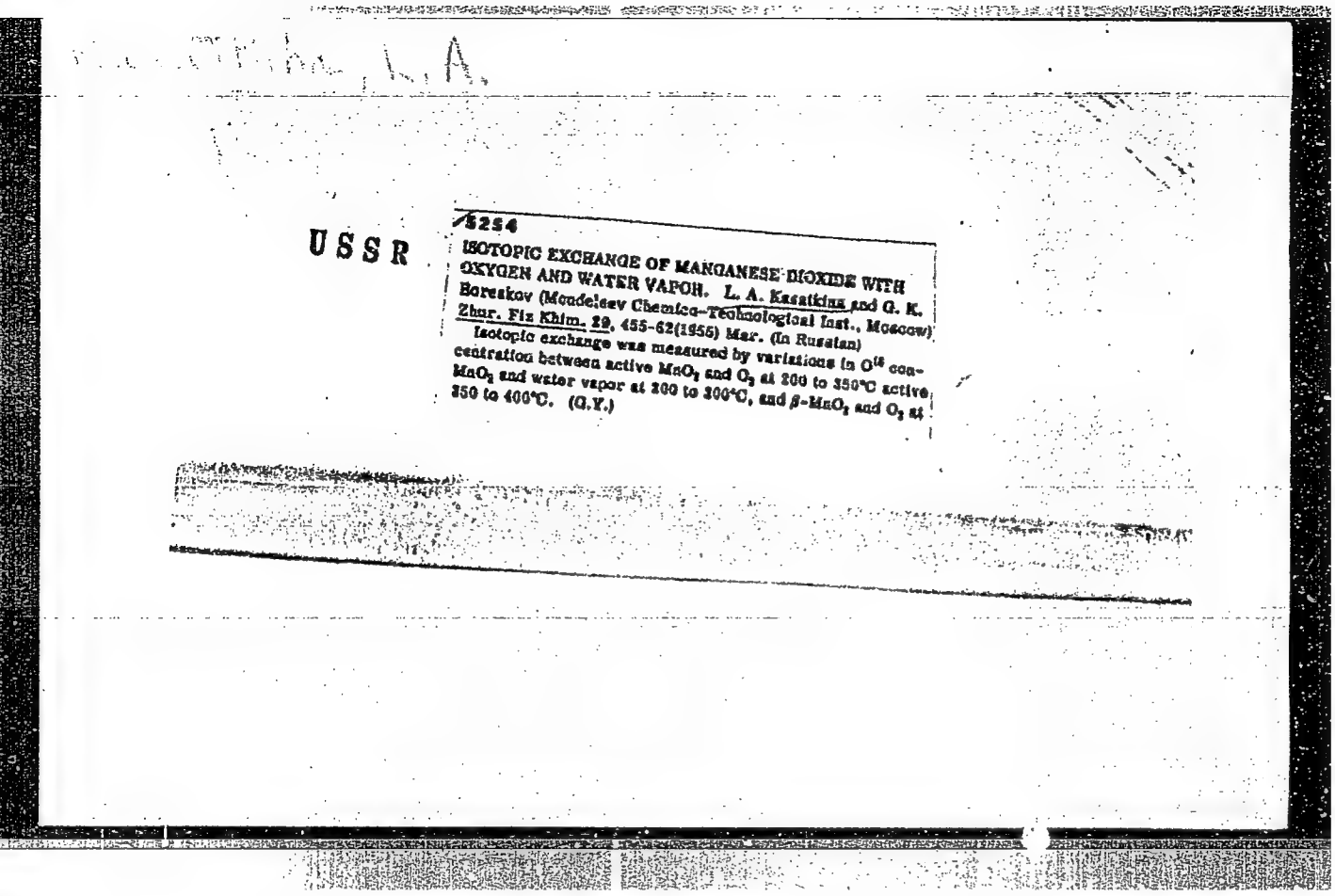
Treatment of brucellosis by vaccination and by bathing at a health resort in water containing sulfur., Sov. med., no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. UNCLASSIFIED.

KASATKINA, L. A.

Dissertation: "Investigation of Isotope Exchange of Some Oxidizing Catalysts with Oxygen and Water Vapor." Cand Chem Sci, Chemico-technological Inst, Moscow, 1953. (Referativnyy Zhurnal--Khimiya, Moscow, No 5, Mar 54)

SO: SUM 243, 19 Oct 1954



USSR

5254

ISOTOPIC EXCHANGE OF MANGANESE DIOXIDE WITH OXYGEN AND WATER VAPOR. L. A. Kazitsina and G. K. Boreskov (Mendeleev Chemico-Technological Inst., Moscow) Zhur. Fiz Khim. 29, 455-62(1955) Mar. (In Russian)

Isotopic exchange was measured by variations in O^{18} concentration between active MnO_2 and O_2 at 200 to 350°C active MnO_2 and water vapor at 200 to 300°C, and β-MnO_2 and O_2 at 350 to 400°C. (G.Y.)

AUTHORS: Kasatkina, L. A., Boreskov, G. K., Krylova, Z. L., Popovskiy, V. V.

153-58-1-3/29

TITLE: Investigation on the Mobility of Oxygen in Vanadium-Pentoxide by Means of the Isotope-Exchange Method (Issledovaniye podvizhnosti kisloroda pyatiokisi vanadiya metodom izotopnogo obmena)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy Khimiya i khimicheskaya tekhnologiya, 1958, Nr 1, pp. 12 - 19 (USSR)

ABSTRACT: Vanadium pentoxide forms the active component of many oxidizing catalysts (vanadium contact-masses with the production of H_2SO_4, catalysts of the naphthalene-, anthracene-oxidation and of other production). It was interesting to compare the catalytical activity of V_2O_5 and the readiness of the exchange of its oxygen against the molecular-oxygen and the steam. A survey of the publications (References 1 to 4) dealing with this problem is given. It is followed by an experimental part with the description of the methods. The following conclusions were drawn from the results obtained:

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Investigation on the Mobility of Oxygen in Vanadium-Pentoxide by Means of the Isotope-Exchange Method 153.-58-1-3/29

1)After an investigation of the isotopic exchange of the vanadium pentoxide with oxygen (at 450,500,530 and 550°C) and with steam (at 200,385 and 450°C), it was found that the exchange with oxygen at all above-mentioned temperatures is accelerated very rapidly. At 200° an exchange against steam does not take place.
2)It was proved that the exchange with steam (figures 7 to 9) takes place at lower temperatures and at greater velocities than with molecular oxygen (figures 1 to 6).
3) An addition of potassium-sulfate increases the exchangeability of pentoxide both with oxygen and with steam.
4) The exchange between the vanadium-preparations and the molecular oxygen is determined by the exchange on the surface and takes place according to the first order. In the case of steam the velocity of surface-exchange is considerably higher; the oxygen diffusion does not follow the equalization of the isotopic composition in the interior of the crystal, so that the velocity of exchange decreases more rapidly with increasing degree of exchange, than this would

Card 2/3

correspond to the equation of first order.There are 9 figures and 7 references, 6 of which are Soviet.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva, Kafedra tekhnologii razdeleniya i primeneniya izotopov (Moscow Chemical Technological Institute imeni D. I. Menedeleyev, Professorial Chair for the Technology of the Separation and Use of Isotopes)

SUBMITTED: October 22, 1957

BORESKOV, G.K.; KASATKINA, L.A.; POPOVSKIY, V.V.; BALOVNEV, Yu.A.

Oxygen mobility and the catalytic activity of vanadium pentoxide promoted with potassium sulfate. Kin.i kat. 1 no.2:229-236 Jl-Ag '60. (MIRA 13:8)

1. Fiziko-khimicheskiy institut im. L.Ya.Karpova.
(Vanadium oxide)
(Potassium sulfate)
(Oxygen--Isotopes)

KASATKINA, L.A.; BORESKOV, G.K.; SOKOLOV, P.N.

Effect of potassium sulfate additions on the lability of oxygen in vanadium pentoxide. Zhur. fiz. khim. 34 no.2:360-366 F '60. (MIRA 14:7)

1. Khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva, Moskva.
(Potassium sulfate) (Vanadium oxide) (Oxygen)

33489
S/195/61/002/005/014/027
E111/E485

5.1190

AUTHORS: Dzisyak, A.P., Boreskov, G.K., Kasatkina, L.A., Kochurikhin, V.Ye.

TITLE: Influence of additions of alkali-metal sulphates on the catalytic properties of vanadium pentoxide in the oxygen isotope-exchange reaction

PERIODICAL: Kinetika i kataliz, v.2, no.5, 1961, 727-731

TEXT: The authors report their investigation of the catalytic activity of vanadium-pentoxide preparations, with additions of analytical reagent purity sulphates of lithium, sodium, potassium, rubidium or caesium (0.1 mol per mol of V_2O_5) as promoters, in the temperature range 400 to 480°C and 40 mm Hg oxygen pressure. For potassium sulphate mol fractions of 0.025 and 0.05 were also tested. The method and apparatus used to study the homomolecular reaction $O_2^{16} + O_2^{18} = 2O^{16}O^{18}$ were described in an earlier paper (Ref.6: Kinetika i kataliz, v.2, 1961, 386). Furthermore, the isotope exchange of each of the preparations with molecular oxygen was studied when no homomolecular exchange was taking place. Results are compared with those for pure vanadium pentoxide

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Influence of additions of alkali- ...

obtained previously (Ref.3: Kinetika i kataliz, v.1, 1960, 229 and Ref.6: as quoted above). Preliminary experiments had shown that both the rates R and K, respectively, of the catalyst/gas and the homo-molecular follow the first-order equation. When a catalyst enriched by a concentration of O^{18} equal to that in the gas is used, R can be calculated from

$$R = \frac{2,3}{\tau S} \frac{N_r \cdot N_\tau}{N_r + N_\tau} \lg \frac{C^0_{18} - C^*_{18}}{C_{18} - C^*_{18}}, \qquad (1)$$

and K from

$$K = \frac{2,3}{\tau S} \lg \frac{C^*_{34} - C^0_{34}}{C_{34} - C_{34}} \qquad (2)$$

In the case of simultaneous isotope exchange with the catalyst, the equation is

$$e^{\frac{KS}{N_r}\tau} = \frac{C^0_{34} - 2C^0_{18} + 4C^{0*}_{18}(C^0_{18} - C^*_{18}) + 2(C^0_{18} - C^*_{18})^2 \frac{K-R}{K-2R}}{C_{34} - 2C_{18} + 4C^*_{18}(C_{18} - C^*_{18}) + 2(C_{18} - C^*_{18})^2 \frac{K-R}{K-2R}} \qquad (3)$$

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Influence of additions of alkali- ...

In these equations R and K are in g/m^2 hour, N_Γ is the amount of oxygen in the gas phase, g; N_T that in the catalyst, g; S is the surface of the catalyst charge, m^2; τ is time, hours; C^o_{18}, C_{18} and C^∞_{18} are the O^{18} proportion in the gas at the initial instant, at time τ and at equilibrium, respectively; C^o_{34}, C_{34} and C^∞_{34} are the corresponding proportions of $O^{16}O^{18}$. The activation energy and rate values for the two reactions studied were found to be virtually the same. The rates were increased by the presence of the promoters, the order of promoter effectiveness (present in 0.1 mol-fraction concentration) increasing in the following order: $Li_2SO_4 < Na_2SO_4 < K_2SO_4 < Rb_2SO_4 < Cs_2SO_4$. The first increased the rate by 1.2, the last by about 100-fold. Even 0.025 mol of K_2SO_4 per mol pentoxide gave a considerable increase in both K and R, which were also found to be linearly related to the K_2SO_4 concentration. There are 3 figures, 2 tables and 7 references: 4 Soviet-bloc and 3 non-Soviet-bloc. The two references to English language publications read as follows: Ref.2: C.R.Kinney, J.Pincus, Ind. Eng. Chem., v.43, 1951, 2880; H.Hong, Chem. Ind., 1951, 872; Ref.4: Tandy. J. Appl. Chem., v.6, 1956, 68.

Card 3/4

33489
S/195/61/002/005/014/027
E111/E485

Influence of additions of alkali- ...

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I.Mendeleyeva (Moscow Chemical-technological Institute im. D.I.Mendeleyev)

Card 4/4

35064

S/195/62/003/001/005/010
E071/E136

5,1190

AUTHORS: Dzisyak, A.P., Boreskov, G.K., and Kasatkina, L.A.

TITLE: An investigation of homomolecular oxygen exchange on the metal oxides of the fourth period

PERIODICAL: Kinetika i kataliz, v.3, no.1, 1962, 81-90

TEXT: The object of the work is a systematic investigation of homomolecular exchange of oxygen on oxides of transitional metals of the fourth period in order to elucidate the mechanism of the intermediate interaction of molecular oxygen with oxides and the establishment of the relationship between the catalytic activity and chemical nature of an oxide. In the reported part of the work the apparent activation energy and the order in respect of oxygen of homomolecular oxygen exchange

$$^{16}O_2 + {}^{18}O_2 = 2\ {}^{16}O\ {}^{18}O$$

on the above oxides were determined. The study was carried out in a static circulation apparatus described earlier (Ref.5: Kinetika i kataliz, v.2, 1961, 386, 727) by the present authors and V.Ye. Kochurikhin. The starting non-equilibrium mixtures

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of isotopic oxygen molecules were prepared by mixing enriched oxygen with a concentration of ^{18}O of 37% with natural oxygen in a ratio of 1:1. The control of all types of oxygen molecules was carried out with a mass spectrometer МИ-1305 (MI-1305). The relative accuracy of measuring the concentration was ± 1%. A sample of oxide charged into the reaction vessel was treated for 8 hours in a vacuo (10^{-5} mm Hg) at 400 °C. Subsequently the isotopic exchange of the oxide investigated with molecular oxygen was carried out. To remove the distorting influence of isotopic exchange, all samples were kept in oxygen with the initial concentration of heavy isotope until cessation of the exchange. Moreover, before each measurement the catalyst specimen was retained in the initial mixture to establish a stationary composition of the oxide. Due to this treatment the content of ^{18}O in gas during homomolecular exchange reaction remained constant. The preparation of oxides was described previously (Ref.8: V.V. Popovskiy, G.K. Boreskov, Sb. Problemy kinetiki i kataliza, v.10, Izd-vo AN SSSR, M., 1960, p.67 (Symposium: Problems of Kinetics and Catalysis, v.10, edited by

AS USSR, p.67). The powders were pressed into tablets and crushed into grains of 3 mm. Specific surface of oxides was determined by low temperature nitrogen absorption. It was established that the activity of the oxides investigated in respect of homomolecular exchanges increases in the following order:
$TiO_2 < V_2O_5 < Cr_2O_3 < ZnO < Fe_2O_3 < CuO = NiO < MnO_2 < Co_3O_4$.
The velocity of homomolecular exchange is equal to the initial velocity of isotopic exchange between molecular oxygen and oxygen of the respective oxide. The following stages of the reaction are necessary for the homomolecular exchange: 1) adsorption - desorption of molecular oxygen with its dissociation into atoms or ions; 2) migration of adsorbed atoms or ions along the surface. For isotopic exchange between oxide and gas a stage of substitution of an ion in the lattice with adsorbed oxygen is necessary. Two possible mechanisms can explain the equality of velocities of homomolecular and isotopic exchange. (1) Adsorption - desorption of molecular oxygen takes place at a much lower velocity than the exchange of adsorbed atoms or ions of oxygen with ions of lattice oxygen. In this case the ratio of

concentration of molecules $^{16}O\ ^{18}O$ to $^{18}O\ ^{18}O$ in the gas should remain constant. (2) Oxygen is adsorbed with dissociation into atoms or ions but the desorption, due to a low concentration or mobility of these atoms or ions, takes place mainly on their recombination into molecules with ions of lattice oxygen. In this case the ratio of $^{16}O\ ^{18}O$ to $^{18}O\ ^{18}O$ should increase in the course of the reaction. Previous experiments (Ref.5) with V_2O_5 and V_2O_5 with additions of alkali sulphates favour the first mechanism. However, these results cannot be transferred to other oxides without special experiments.
There are 5 figures, and 3 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva
(Moscow Institute of Chemical Technology imeni D.I. Mendeleyev)

SUBMITTED: November 15, 1961

Card 4/4

KASATKINA, L.A.; ANTOSHIN, G.V.

Isotope exchange between molecular oxygen and carbon dioxide on manganese dioxide. Kin.i kat. 4 no.2:252-259 Mr-Ap '63. (MIRA 16:5)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva.
(Carbon dioxide) (Oxygen isotopes) (Manganese oxides)

L 11121-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD

ACCESSION NR: AP3002020 S/0195/63/004/003/0422/0430

AUTHOR: Gorgoraki, V. I.; Kasatkina, L. A.; Levin, V. Yu. 58 57

TITLE: Study of the effect of various lithium and gallium admixtures on the catalytic properties of zinc oxide in the homomolecular exchange of oxygen isotopes

SOURCE: Kinetika i kataliz, v. 4, no. 3, 1963, 422-430 19

TOPIC TAGS: oxygen isotope exchange, ZnO catalyst, Li, Ga, kinetics

ABSTRACT: Within a temperature range of 425-550C and oxygen pressures of 5-200 mm Hg, the authors studied the homomolecular exchange of oxygen isotopes (see enclosure) in the presence of ZnO and ZnO to which Li sub 2 CO sub 3 (0.25, 0.5, and 0.75 atom % Li) and metallic Ga (0.25 and 0.5 atom % Ga) had been added. The activation energy for this reaction was about 40kcal/mol. It was first-order with regard to O. Addition of Li to ZnO increased the reaction rate, while addition of Ga slowed it down. There was an inverse relationship between the amount of Ga present and the reaction rate. The greatest loss of activity was found with a ZnO preparation containing 0.5 atom % Li. The electronic work functions measured for pure ZnO catalysts and those containing Li and Ga were almost identical. In an oxygen atmosphere (40 mm Hg), addition of both Li and Ga reduced the work function

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L 11121-63
ACCESSION NR: AP3002020

to values below that for pure ZnO. The authors conclude that the limiting stage is the sorption of oxygen molecules with dissociation into their atoms. A comparison is made of the physical and catalytic properties of these preparations. A possible mechanism for the effect of Li and Ga is hypothesized. Orig. art. has: 5 figures, 3 schematic diagrams, 2 tables, and 3 formulas.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendeleyeva (Moscow Chemical Engineering Institute)

SUBMITTED: 04May62 DATE ACQ: 12Jul63 ENCL: 01

SUB CODE: 00 NO REF SOV: 006 OTHER: 006

Card 2/3

BORESKOV, G.K.; GORGORAKI, V.I.; KASATKINA, L.A.

Reaction involved in a homomolecular exchange of oxygen between ZnO and NiO at room temperature. Dokl. AN SSSR 150 no.3:570-573 My '63. (MIRA 16:6)

1. Moskovskiy khimiko-tekhnologicheskiy institut im. D.I. Mendeleyeva. 2. Chlen-korrespondent AN SSSR (for Boreskov).
(Oxygen) (Metallic oxides)
(Chemical reaction, Rate of)

BORESKOV, G.K.; DZISYAK, A.P.; KASATKINA, L.A.

Homomolecular oxygen exchange studied on oxides of metals of the fourth period. Part 2: Catalytic activity and bond energy of oxygen in oxides. Kin. i kat. 4 no.3:388-394 My-Je '63. (MIRA 16:7)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR i Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.
(Metallic oxides) (Chemical bonds)
(Catalysis)

GORGORAKI, V.I.; KASATKINA, L.A.; LEVIN, V.Yu.

Effect of various admixtures of lithium and gallium on the catalytic properties of zinc oxide in relation to the homomolecular exchange of oxygen isotopes. Kin. i kat. 4 no.3: 422-430 My-Je '63. (MIRA 16:7)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.
(Oxygen isotopes) (Zinc oxide)
(Catalysis)

GORGORAKI, V.I.; KASATKINA, L.A.

Influence of the conditions of zinc oxide preparation with indium and gallium additions and without them on the catalytic properties in the reaction of homomolecular exchange with oxygen isotopes. Kin. i kat. 4 no.4:620-624 Jl-Ag '63. (MIRA 16:11)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni D.I.Mendeleyeva.

ACCESSION NR: AP4008167 S/0195/63/004/006/0863/0866

AUTHOR: Gorgoraki, V. I.; Kasatkina, L. A.; Levin, V. Yu.

TITLE: Effect of additives and operating conditions on isotope exchange between oxygen and zinc oxide

SOURCE: Kinetika i kataliz, v. 4, no. 6, 1963, 863-866

TOPIC TAGS: zinc oxide, zinc oxide lithium, zinc oxide gallium, zinc oxide indium, oxygen 18, isotope exchange, homomolecular exchange, isotope exchange rate, zinc oxide calcination, lithium, gallium, indium

ABSTRACT: The effects of adding Li, Ga and In and of changing conditions of preparing the catalyst, on the kinetics of ZnO isotope exchange (O_{18}) were investigated by methods described in authors' previous work (Kinetika i kataliz 4, 422, 1963). Data obtained are compared with results of studies on homomolecular exchange by the same preparations. Increasing temperature of ZnO calcining from 850-1200C somewhat increases isotope exchange rate. Addition

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ACCESSION NR: AP4008167

of Li (0.5 + 0.75 at. %), introduced at 850C, increases the rate of the ZnO isotope exchange, the rate becoming greater than the rate of the homomolecular exchange reaction. Addition of Ga and In, introduced at 850C, decreases isotope exchange rate. Increading temperature of calcining ZnO containing 0.5% Ga from 850 - 1200C increases isotope exchange rate to the point that it equals the rate of pure ZnO calcined at 1200C. In all cases with the exception of 0.5 and 0.75 at.% Li additions, the rate of the homomolecular exchange reaction is about that of, or somewhat greater than the isotope exchange rate of ZnO; with Li the homomolecular exchange is slower. The authors consider it their obligation to thank G. K. Boreskov for discussing the material of the present work." Orig. art. has: 2 tables and 3 figures

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut im. D. I. Mendelayeva (Moscow Chemical Technological Institute)

SUBMITTED: 21Jan63 DATE ACQ: 09Jan64 ENCL: 00

SUB CODE: MA NO REF SOV: 004 OTHER: 003

Card 2/2

ACCESSION NR: AP4016519 S/0195/64/005/001/0120/0127

AUTHOR: Gorgoraki, V. I.; Boreskov, G. K.; Kasatkina, L.A.; Sokolovskiy, V. D.

TITLE: Homomolecular exchange of oxygen on zinc oxide at low temperatures

SOURCE: Kinetika i kataliz, v. 5, no. 1, 1964, 120-127

TOPIC TAGS: zinc oxide, zinc oxide catalyst, homomolecular exchange, catalytic action, oxygen 16, oxygen 18

ABSTRACT: This study was prompted to determine the causes of catalytic action of ZnO. To comprehend the causes, one should understand the nature and character of bonds formed by the dissociative chemosorption of oxygen on the surface of oxides. The exchange reaction at room temperature not only affects ZnO (an n-type semiconductor), but also NiO (a p-type semiconductor). The reaction was investigated by means of homomolecular exchange of oxygen isotopes

Card 1/2

ACCESSION NR: AP4016519

$O_2^{16} + O_2^{18} = 2O^{16}O^{18}$ on ZnO calcined at 850C, and then rapidly cooled to 25, -63 and -194C. At the two latter temperatures the exchange rate is close to that at 425C, and the product has a stable activity. The apparent activation energy at these two temperatures is 0.18 kcal/mol. The exchange rate in the initial moment at 25C is many times greater than in the 425-500C range. In oxygen atmosphere there is a rapid deactivation (5-6 hrs) of ZnO, but deactivated ZnO can be reactivated with zinc vapor. The catalytic activity of ZnO is caused by zinc excess. This can be the internodular zinc of the surface oxide layer, i.e., Zn dissolved in ZnO or zinc formed on the surface oxide layer and adsorbed by same. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Moskovskiy khimiko-tekhnologicheskiy institut imeni D. I. Mendeleyeva (Moscow Chemical Engineering Institute)

SUBMITTED: 24Apr 63 DATE ACQ: 18Mar64 ENCL: 00

SUB CODE: CH NO REF SOV: 002 OTHER: 005

Card 2/2

KASATKINA, L.A.; SHUSTOV, V.I.

Isotopic exchange of oxygen of vanadium pentoxide with sulfur dioxide and trioxide. Kin. i kat. 5 no.5:945-948 S-O '64.
(MIRA 17:12)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

[illegible], L.V.; [illegible], A.P.

Effect of the temperature of special treatment of manganese dioxide on the rate of oxygen isotope exchange. Kin. i kat. 6 no.3:476-485 My-Je '65. (MIRA 18:10)

1. Moskovskiy khimiko-tekhnologicheskiy institut imeni Mendeleyeva.

SHAPIRO, M.Ya.; KASATKINA, L.A.

Cuprometric determination of the chromate ion. Zav. lab. 31 no.1: 40 '65. (MIRA 18:3)

1. Odesskiy meditsinskiy institut.

BUYANOVSKIY, N.I., red.; KASATKINA, L.G., vedushchiy red.

[Small and reduced diameter hole drilling]Opyt bureniia skvazhin umen'shennogo i malogo diametra. Moskva, skvazhin umen'shennogo i malogo diametra. Moskva, GOSINTI, 1962. 139 p. (MIRA 16:4)

1. Institut tekhnicheskoy informatsii i ekonomicheskikh issledovaniy po neftyanoy i gazovoy promyshlennosti.
(Oil well drilling)

ACC NR: AP6033624 SOURCE CODE: UR/0102/66/000/005/0051/0056

AUTHOR: Kasatkin, A. M. (Kiev); Kasatkina, L. M. (Kiev)

ORG: none

TITLE: Simulation of purposeful behavior of living organisms

SOURCE: Avtomatyka, no. 5, 1966, 51-56

TOPIC TAGS: automaton, data processing equipment, finite automaton, information processing, cybernetics

ABSTRACT: The authors describe an informal automaton which imitates some aspects of information processing by the human brain. The described automaton simulates the motor behavior of a man in a medium containing positive and negative irritants of different intensities. The automaton accept and realizes the decisions determined by it. These decisions are formed during processing in the logical, emotional, and motor spheres of the automaton, and are based on information received through the automaton inputs about state of the outer medium. The automaton's actions in conditional medium are directed towards definite object, which may either be given by an experimenter or formulated by the automaton itself. For this purpose the automaton makes a schedule of motion in the medium which is controlled by certain slave mechanisms. Since the schedule is constructed in stages, unsatisfactory results obtained at any stage of realization can be remedied by revising the schedule. Self-training is possible for some types of information processing. Orig. art. has: 4 figures.

SUB CODE: 09/06/SUBM DATE: 04Apr66/ ORIG REF: 005/

Card 1/1

KASHTKINA L. V.

EXCERPTA MEDICA Sec 3 Vol 13/5 Endocrinology May 59

3 [illegible]. MECHANISM OF PROLONGATION OF INSULIN ACTION BY ZINC IONTOPHORESIS (Russian text) - Kasatkina L. V. Med. Stomatol. Inst., Moscow - PATOL. FIZIOL. I EKSPER. TERAP. 1957, 1/4 (32-38) Tables 2

Sixty diabetics were studied. Eighteen healthy subjects or patients not suffering from diabetes were investigated as controls. In all subjects under investigation sugar tolerance before and after zinc iontophoresis was determined. In the diabetics the glycaemic curve (for a period of 9-10 hr.) was determined: first after insulin injections and then with simultaneous combination of galvanization and zinc iontophoresis with insulin injection on the treated side in most of the patients and on the opposite side in 20 patients. In the control group zinc iontophoresis inhibited the blood sugar curve, and in the diabetics it definitely prolonged (up to 9-15 hr.) and slightly enhanced insulin action with a gradual fall in blood sugar level. There was no such effect after galvanization. In 70% of cases combination of insulin therapy and zinc iontophoresis made it possible to cut down the number of injections to only one injection in the morning and to decrease the daily insulin dose by 50%. Added to this, there were no hypoglycaemic reactions. Experimental zinc iontophoresis in 6 rabbits using Zn^{56} showed the presence of a stable subcutaneous depot from which zinc ions pass into the blood stream and later into the pancreas. The prolongation of insulin activity by zinc iontophoresis depends, apparently, on several factors: combination of insulin with zinc ions in the bloodstream, stimulation of the endogenic insulin secretion and the complex reflex type of action of the zinc iontophoresis. Davydova - Moscow (S)

KHSATKINA, L. V.

USSR/Human and Animal Physiology - Internal Secretion. T
The Pancreas.

Abs Jour : Ref Zhur Biol., No 3, 1959, 13010

Author : ~~Kasatkina, L.V.~~

Inst : Moscow Medical Institute

Title : Experimental Data on Mechanism of Prolonged Action of Zinc Iontophoresis on the Insulin Effect

Orig Pub : Uch. zap. 2-go Mosk. med. in-ta, 1957, 6, 126-131

Abstract : Six rabbits were studied with radioactivity (Zn^{65}) of the electrode layer 500 millicurie, duration of iontophoresis (I) 30 minutes, electrode surface 50 cm^2, and intensity of the current 5 - 6 milliampere. The rabbits were sacrificed immediately, 2 hours, and 24 hours after inotophoresis. Immediately and 2 hours after I at the site of application of the electrode

Card 1/3

Abs Jour : Ref Zhur Biol., No 3, 1959, 13010

there was observed 20 - 24% of Zn^{65}, and after twenty-four hours 15 - 19%. During the twenty-four hour period there was a decrease in the amount of Zn^{65} in the superficial layers of skin and an increase in the deeper layers of skin at the site of I. In the organism of the rabbit (except at the site of I) immediately after I 4% of Zn^{65} had been used up, and after twenty four hours 5%. Two hours after I the concentration of Zn^{65} in the blood and muscles was approximately the same, and in the liver it was 10-fold and in the pancreas (P) $4\frac{1}{2}$-fold higher than in the control. After twenty-four hours the concentration of Zn^{65} in the muscles was almost unchanged. The concentration of Zn^{65} in the liver and pancreas exceeded its concentration in the blood 4 and 10-fold respectively, i.e., the P stored Zn^{65}. Evidently the more delayed effect of insulin with its injection at the site

USSR/Human and Animal Physiology - Internal Secretion. T
The Pancreas.

Abs Jour : Ref Zhur Biol., No 3, 1959, 13010

of I is explained primarily by the formation at the site of injection of a depot containing Zn-insulin.

Card 3/3

KASATKINA, L.V.

Effect of histamine on the development of experimental atherosclerosis. Kardiologiia 3 no.3:45-50 My-Je '63. (MIRA 16:9)

1. Iz Instituta terapii (direktor - deystvitel'nyy chlen AMN SSSR prof. A.L.Myasnikov) AMN SSSR.
(HISTAMINE) (ARTERIOSCLEROSIS)

KASATKINA, L.V., Cand Med Sci--(diss) "On the potentiation of the action of insulin by the method of zinc-ionophoresis." Mos, 1958. 15 pp (Min of Health RSFSR. Mos Med Stomatological Inst), 200 copies (KL,45-58, 152)

ZAITSEV, V.F.; MYASNIKOV, L.A.; KASATKINA, L.V.; LOBOVA, N.M.; SUKASOVA, T.I.

The effect of ascorbic acid on experimental atherosclerosis.
Cor Vasa 6 no.1:19-25 '64.

1. Institute of Internal Medicine, Academy of Medical Sciences, Moscow.

93-4-3/20

AUTHOR: Moshikin, A. S., Kasatkina, M. I.

TITLE: Bit Wear Characteristics at Various Depth Ranges in the Mukhanovo Area. (Rezul'taty pointerval'noy otrabotki dolot na Mukhanovskoy ploshchadi)

PERIODICAL: Neftyanoye Khozyaystvo, 1957, Nr.4, pp.6-11 (U.S.S.R.)

ABSTRACT: Under the guidance of VNIIBurneft' two wells (No. 244 and 245) were bored for experimental purposes at the Mukhanovo area (Kuybyshevneft') by the same drilling crew, using the same type of bits, maintaining identical operating conditions and penetrating similar rock formations. The bits used were of the T(OM-183) type. Special instruments (SKP-3 - Sborka Kontrolya Protsessov bureniya, and GIV-2 and GIV-4 - gidravlicheskiy Indikator Vesa) recorded the penetration rate of the bit and its axial load. The average footage drilled in one of the wells amounted to 22.7 m per bit at an average penetration rate of 15 m/h; the averages at the other well located at a distance of 400 m were 19.4 m and 16.1 m/h respectively. The differences were due to the fact that slightly different rock formations were encountered at the depth of 900-1,350 m.

Card 1/3

Bit Wear Characteristics at Various Depth Ranges in the Mukhanovo Area. (Contd).

The wells were 2,230 m deep and were divided into seven different zones, each characterized by different geological conditions. Footage drilled per bit and the penetration rate are given separately for each zone. This information is followed by a description of the wear characteristics of various parts of the bit in a given zone. Subsequently recommendations are made on the type of teeth and bearings to be used and on the loads to be applied on the bits at various depths.

Six diagrams are presented. Each of them shows to curves. Curve No. 1 represents the load on the bit (vertical axis) at various depths. Curve No. 2 represents the penetration rate in meters per hour (vertical axis) at various depths (horizontal axis). The serial numbers of the bits used and various wear characteristics of their parts are indicated in the legends.

Card 2/3

KASATKINA, M.I.; FEDOTOV, G.I.

Effect of gaps in a cone bearing on the durability of the bearing. Neft. khoz. 38 no.7:38-43 Jl '60. (MIRA 14:10)
(Boring machinery)

KASATKINA, M.N.

Relationship between weight and the intensity of gaseous interchange in ecologically different chironomid species. Dokl. AN SSSR 135 no.1:182-184 N '60. (MIRA 13:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova. Predstavleno akademikom I.I.Shmal'gauzenom.
(CHIRONOMIDAE) (RESPIRATION)

KASATKINA, M. S.

"The Effectiveness of Using Mechanical Hot Stamping Presses Instead of Presses With Air-Steam Hammers." Cand Tech Sci, Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin, Min Higher Education, USSR, Moscow, 1955. (KL, No 14, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (16).

Metal Analysis

SOV/137-58-8-16952

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 104 (USSR)

AUTHOR: Kasatkina, M.S.

TITLE: Organization of the Process of Forming on Mechanical Forging Presses (Organizatsiya protsessa shtampovki na mekhanicheskikh goryacheshtampovochnykh pressakh)

PERIODICAL: Sb. Mosk. in-t stali, 1958, Vol 38, pp 383-404

ABSTRACT: An analysis is presented of the organization of the press operator's work in successive and successive-and-parallel performance of manual operations, and a determination is made of the magnitude of increase in productivity when the organization of the job is improved in forming (F) on mechanical forging presses. Descriptions are presented of measures to increase labor productivity, and an analysis of the reduction in the labor expended in F of forgings and of the F working time is given. It is noted that on transition to an improved organization of the work of the press operator, considerable gains are achieved in the F of forgings requiring less physical labor and in F on high-pressure presses. Note is taken of the increase in labor productivity when manual operations are done in successive-

Card 1/2

Cand Tech Sci - Chr. Economics and organization of production, Moscow Inst. Steel im Stalin

SOV/137-58-8-16952

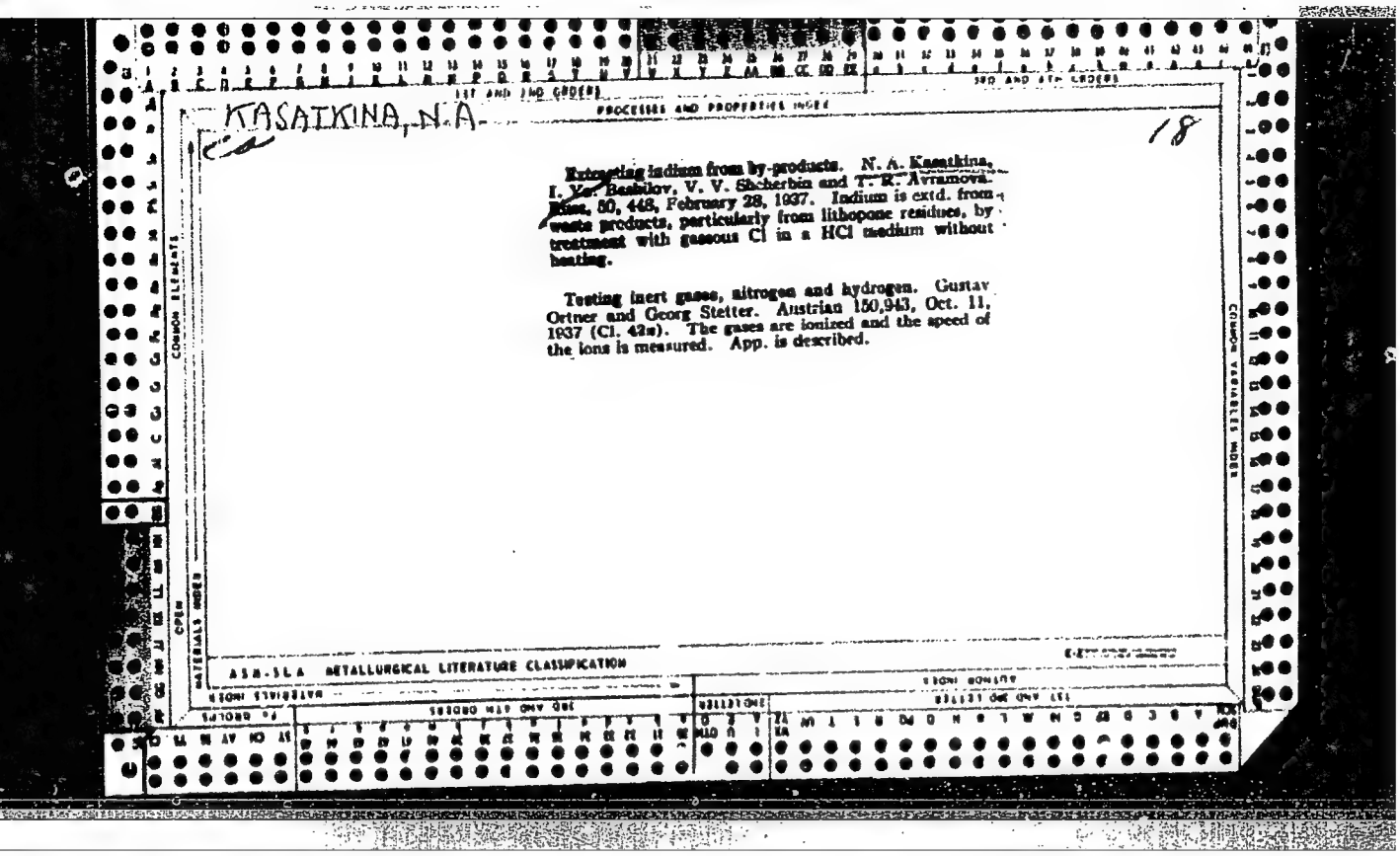
Organization of the Process of Forming on Mechanical Forging Presses

and-parallel form, and it is proposed that F be done with a number of inserts in each die and with successive-and-parallel performance of operations. The process flow sheet is adduced, and a calculation of an economic evaluation of the new method of F is presented. Note is taken of the need for a considerable increase in die life by means of water cooling, if the economies of the process are to be realized. In order to provide time for insert "rest", it is suggested that the forgings be F in sets of two, with a number of identical inserts in the die.

G.F.

1. Forge presses---Operation
2. Personnel--Performance
3. Industrial production---Analysis

Card 2/2



KASATKINA, N.A.

Ca

18

Extracting indium from by-products. N. A. Kasatkina, I. Ye. Beabilov, V. V. Shcherbin and T. R. Avramova. Russ. 50, 448, February 28, 1937. Indium is extd. from waste products, particularly from lithopone residues, by treatment with gaseous Cl in a HCl medium without heating.

Testing inert gases, nitrogen and hydrogen. Gustav Ortner and Georg Stetter. Austrian 150,943, Oct. 11, 1937 (Cl. 42a). The gases are ionized and the speed of the ions is measured. App. is described.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

KASATKINA, NA.

Kasatkina, N.A.--"Growth and Accumulation of Phosphorus, Nitrogen, and Arsenic by the Fungus Penicillium brevicaule Under Conditions of Arsine Formation." Cand Biol Sci, Kazan'State Medical Inst, Kazan'1953.(REFERATIVNYY ZHURNAL--KHIMIYA, No1, Jan 54.

Source: SUM 168, 22 July 1954

PYATNOV, V.I.; BIBIKOVA, V.I.; DARVOYD, T.I.; IVANOVA, R.V.; KASATKINA, N.A.; GINZBURG, A.I., nauchnyy red.; NEMANOVA, G.F., red. izd-va; BYKOVA, V.V., tekhn. red.

[Industry's requirements as to quality of mineral raw materials] Trebovaniia promyshlennosti k kachestvu mineral'nogo syr'ia; spravochnik dlia geologov. Izd.2., perer. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol. i okhrane nedr. No.53. [Thallium, indium, gallium] Tallii, indii, gallii. By V.I.Piatnov i dr. Nauchn. red. A.I.Ginzburg. 1961. 53 p. (MIRA 14:11)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy institut mineral'nogo syr'ya.
(Thallium) (Indium) (Gallium)

ACCESSION NR: AP4019809 S/0279/64/000/001/0078/0084

AUTHOR: Kasatkina, N. A. (Moscow); Vigdorovich, V. N. (Moscow); Nikitina, Z. M. (Moscow); Uvarova, E. S. (Moscow); Konstantinova, L. I. (Moscow)

TITLE: Behavior of impurities during the crystallization refining of indium

SOURCE: AN SSSR. Izv. Metallurgiya i gornoye delo, no. 1, 1964, 78-84

TOPIC TAGS: indium, indium refining, crystallization refining, impurity elimination, solid phase soluble impurity, solid phase insoluble impurity, zone refining

ABSTRACT: A systematic study was made of the behavior of impurities and the conditions present during their elimination from indium in the process of crystallization refining from molten material. Indium specimens with a known impurity content (Cd, Sn, Pb, Hg, Fe, Ni, Cu, Ag) were subjected to zone refining in a nitrogen stream on equipment with one or two heating zones. Crystals extracted from the smelt in a vacuum furnace, at a residual pressure on the order of 10^{-3} mm Hg, were 100-115 mm long and had a diameter of about 10 mm. The rate of extraction ranged from 0.3 to 2 mm/min. The evaluation of the experimental results employed the author's theoretical classification of impurities present in indium as either easy or difficult to eliminate. The former include most of the impurities present, are characterized by poor solid-solution solubility in in and have distribution co-

Card 1/2

ACCESSION NR: AP4019809

efficient values substantially below 1.0. That coefficient is defined here as the ratio of the solid phase concentration of an impurity to its concentration in the liquid phase. About 10 impurities have such values near 1.0, exhibit significant solid-solution solubility, and are difficult to eliminate. Cu, Ag, and Ni are easy to extract, Sn, Pb, Cd, and Hg are difficult. Sublimation of Cd and Hg, as well as oxidation of Fe and In, were noted as secondary processes favorable to the elimination of impurities during recrystallization. Preliminary removal of Pb and Sn is required. Orig. art. has: 6 graphs, 1 table.

ASSOCIATION: none

SUBMITTED: 09May62 DATE ACQ: 31Mar64 ENCL: 00

SUB CODE: ML NO REF SOV: 007 OTHER: 008

Card 2/2

KASATKINA, N.A.

Oil- and gas-bearing basins in Western Europe. Trudy VNIGNI no.42: 5-15 '64. (MIRA 18:3)

KASATKINA, N.A. (Moskva); VIGDOROVICH, V.N. (Moskva); NIKITINA, Z.M. (Moskva); UVAROVA, E.S. (Moskva); KONSTANTINOVA, L.I. (Moskva)

Behavior of impurities during the refining of indium by the crystallization method. Izv. AN SSSR. Met. i gor. delo no.1: 78-84 Ja-F '64. (MIRA 17:4)

KASATKINA, N.F.

PETROVA, Yu.N.; KARPOVA, I.P.; KASATKINA, N.F.

Geochemical study of the organic matter in the Devonian deposits of the Volga-Ural region. Trudy VNIGRI no.82:112-146 '55. (MLRA 8:11)
(Volga Valley--Petroleum geology) (Ural Mountain region--Petroleum geology)

PETROVA, Yu.N.; KARPOVA, I.P.; KASATKINA, N.F.

Geochemical study of the organic substance in upper Paleozoic sediments of the Volga and Ural regions. Avtoref. nauch. trud. VNIGRI no.17:39-42 '56. (MIRA 11:6)
(Volga Valley--Petroleum geology)
(Ural Mountain region--Petroleum geology)

PETROVA, Yu.N.; KASATKINA, N.F.

Study of the remainder of the organic matter in rocks. VNIGRI no.105:125-130 '57. (MIRA 11:9)
(Rocks) (Organic matter)

PETROVA, Yu.N.; KASATKINA, N.F.

Humic acids in dispersed organic matter of rocks. Trudy VNIGRI no.155:28-35 '60. (MIRA 14:1)
(Humic acid) (Rocks, Sedimentary--Analysis)

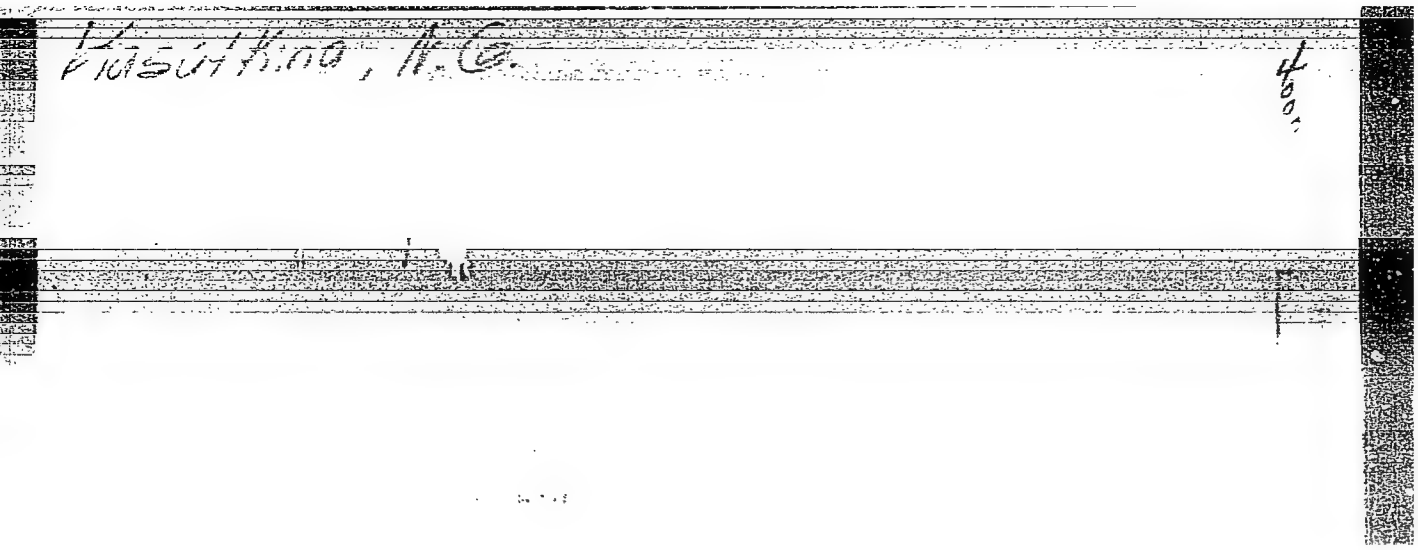
KABATKINA, N. G.

Dissertation: "Investigation of the Ozonization of Unsaturated Organic Compounds." Cand Chem Sci, Leningrad State U, Leningrad, 1954. (Referativnyy Zhural—Khimiya, Moscow, No 10, May 54)

SO: SUM 318, 23 Dec 1954

KASATKINA, N.G.

Determining the percent of 1 - 4, 3 - 4 and 1 - 2 links in synthetic isoprene rubbers from their rate of oxidation by benzoyl hydro peroxide. Zhur.prikl.khim. 32 no.1:170-173 Ja '59. (MIRA 12:4)
(Isoprene) (Chemical bonds) (Oxidation)



KASATKINA, N. G.

1

Ozonization of unsaturated compounds. I. Preparation of curves of the absorption of ozone by unsaturated compounds. A. I. Yakubchik, N. G. Kasatkina, and T. E. Pavlovskaya (State Univ., Leningrad). *Zhur. Obshchei Khim.* 25, 1473-7(1955).—An app. consisting of a series of absorbers contg. the sample in $CHCl_3$ and KI solns. in phosphate buffer is employed for quant. detn. of O_3 uptake by unsatd. compds. The detn. is based on titration of iodine liberated by the O_2-O_3 stream before and after passing through the test soln. The end of the reaction is reached when the 2 titers are equal. Curves of the kinetics of absorption of O_3 in several compds. are shown, including $(:CMe_2)_3$, elaidic acid, diallyl, $(MeC:)_2$, $(PhC:)_2$, allyl alc., 2-methyl-2-hepten-6-one, 4,6-dimethyl-6,8-menthadiene, $Me_2CC:CH$, $PhCH:CH_2$, 2,4-hexadiene, $Me_2CC:CMe$, $MeCH:CHCO_2Me$, piperylene, 3-ethenylcyclohexene. Usually the absorption in the several unsatd. bonds shows different rates detectable on the curves. The uptake of O_3 is generally the theoretical, except for cases listed below with % O_3 absorbed relative to theoretical: 2-methyl-2-hepten-6-one, 144.0%, 4,6-dimethyl-6,8-menthadiene 125%, $Me_2CC:CH$ 112.1%, $MeC:CCMe$, 126%, $MeCH:CHCO_2Et$ 119.3%.

G. M. Kosolapoff

2

USSR/Organic Chemistry - Synthetic Organic Chemistry, [redacted]-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61426

Author: Yakubchik, A. I., Kasatkina, N. G.

Institution: None

Title: Ozonization of Unsaturated Compounds. II. Investigation of the Curves of Absorption of Ozone by Unsaturated Compounds and Their Mixtures

Original Periodical: Zh. obshch. khimii, 1956, 26, No 3, 699-706

Abstract: Investigated were ozone absorption curves (OAC) of various unsaturated compounds (UC) and of their mixtures for the purpose of ascertaining the influence of structure of UC on the rate of addition of ozone. UC can add a whole or a fractional number of ozone mols. A fractional number is added by UC containing CO-group, tert.-C_4H_9 and C_6H_5. Substances which absorb a whole number of ozone mols have OAC without [redacted]ection point (compounds having one or several isolated C = C bonds and acetylenic compounds) or with

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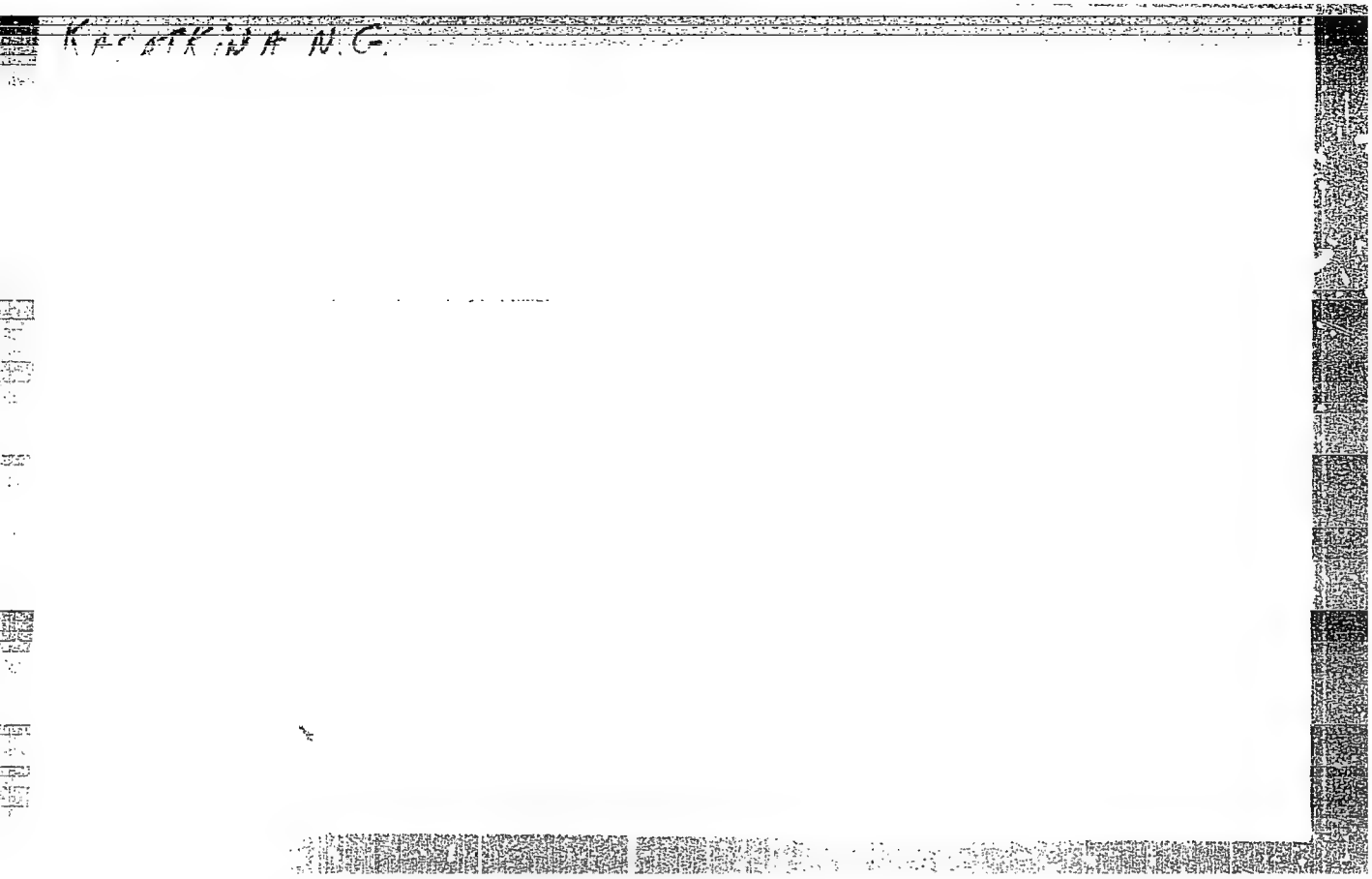
USSR/Organic Chemistry - Synthetic Organic Chemistry, E-2

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 61426

Abstract: an inflection point (UC) containing C = C and C ≡ C bonds, a conjugated system of C = C bonds, [redacted] = C bonds of which 2 are conjugated, and 2 C = C bonds of which one is part of a cycle). For UC absorbing a fractional number of ozone mols OAC with an inflection point have been obtained which are characteristic of substances containing C = C bonds and C_6H_5-group, C ≡ C bonds and C_6H_5 group or several C = C bonds one of which is conjugated with a CO-group. From the shape of OAC an opinion can be formed concerning the nature of multiple bonds and their mutual distribution. It is possible to compare the amount of ozone for the different portions of the curve and determine how many bonds and which bonds are ozonized first and most rapidly. The possibility to draw conclusions concerning the structure of the substance being ozonized on the basis of the shape of OAC has been confirmed by analyses of the products of ozonolysis of styrene and a mixture of diallyl and dimethyl acetylene (I). OAC of mixtures do not differ from OAC of individual compounds. There are presented OAC of the following substances and mixtures (for the mixtures the figures in parentheses show the amount of the components, in %): vinyl butyl acetylene;

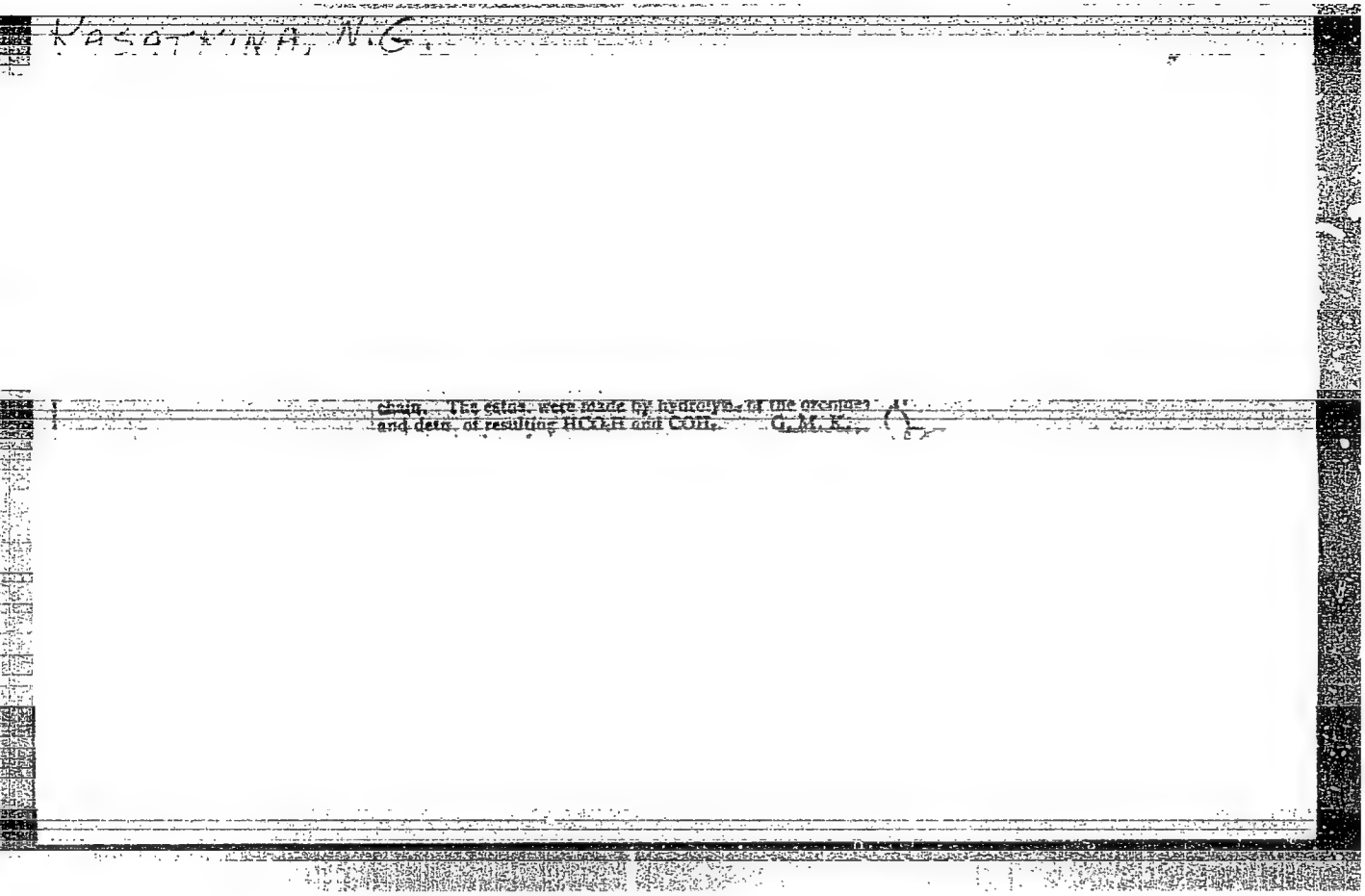
Card 2/3



KRATKINA, N.G.

Oxidative decomposition of [illegible]
rubber [illegible]

was decomposed by [illegible]
found, the acid products were [illegible]
using the H_2O-$CHCl_3$ [illegible]
identified as levulinic, [illegible]
succinic, 1,2,3-propanetr[illegible]
tetracarboxylic acids. These and Au(I) were [illegible]
H_2O_2 treatment of the above [illegible]. The [illegible]
matograms are shown [illegible]



AUTHOR: Kasatkina, N.G. SOV/80-59-1-27/44

TITLE: Determination of the Concentration of Rings 1-4, 3-4, and 1-2 in Synthetic Isoprene Rubbers by the Curves of Their Oxidation Rate With Benzoyl Hydroperoxide (Opredeleniye protsenta zven'yev 1-4, 3-4, i 1-2 v sinteticheskikh izoprenovykh kauchukakh po krivym skorosti okisleniya ikh gidroperekis'-yu benzoila)

PERIODICAL: Zhurnal prikladnoy khimii, 1959, Nr 1, pp 170-173 (USSR)

ABSTRACT: Ethylene compounds with various degrees of substitution are oxidized by the benzoyl hydroperoxide at different rates. It is possible therefore to conclude on the relative contents of double bonds by the kinetic oxidation curves of unsaturated compounds. The present paper contains the results of studying synthetic rubbers containing rings (I), (II) and (III) which characterize double bonds in trisubstitution (1-4 ring), monosubstitution (1-2 ring) and disubstitution nonsymmetrical (3-4 ring) ethylene respectively. Experiments performed made it possible to choose conditions for a simple and rapid determination of the relative content of these rings in synthetic isoprene rubbers by their oxidation rate curves. This has been achieved by means of comparing their curves with the oxidation curves of model compounds, limonene and guttapercha.

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SOV/80-59-1-27/44

Determination of the Concentration of Rings 1-4, 3-4, and 1-2 in Synthetic Isoprene Rubbers by the Curves of Their Oxidation Rate With Benzoyl Hydroperoxide

There are 2 tables, 1 graph and 7 references, 2 of which are Soviet, 3 English, 1 German and 1 unidentified.

SUBMITTED: June 29, 1957

Card 2/2

AUTHORS: Kasatkina, N. G., Dolgoplosk, S. B. SOV/79-29-2-6/71

TITLE: Structure of the Divinyl Polymer, Obtained in the Presence of an Alfin Catalyst (Stroyeniye divinilovogo polimera, poluchennogo v prisutstvii alfinovogo katalizatora)

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 2, pp 377-380 (USSR)

ABSTRACT: The aim of the present investigation was the investigation of the chemical structure of butadiene-1,3-polymer, obtained in the presence of an alfin catalyst (i.e. a complex of an organometallic combination with another component, such as allyl sodium, sodium chloride, etc). From the polymer, the soluble part was separated from the insoluble part, and each part was subjected to ozonization, oxidation cleavage by acetyl hydrogen peroxide and the splitting up of the acids obtained by the distributing chromatography. The chromatogram of the ozonolysis products of the insoluble polymer part, which was obtained in the presence of the above-mentioned catalyst (Fig 2) (the compact line) differs little from the one of the ozonolysis products of the soluble polymer part (Fig 1). In the latter case, the effect of the carbon skeleton of the polymer is some-

Structure of the Divinyl Polymer, Obtained in the Presence of an Alfin Catalyst

what more intense, but the relative quantities of each acid in the acid mixture of the ozonolysis product remain constant. The table contains the data, after removal of the carbon skeleton in various parts of the macromolecule of the polymer obtained in the presence of the above catalyst. Its structure differs from that of sodium divinyl rubber. The larger percentage of the carbon skeleton of the polymer goes to links 1,4. The percentage of links 1,2 is considerably reduced. In conclusion, it was stated that the divinyl polymer shows 16.2% links of the position 1,2 under above conditions, whereas in the case of divinyl rubber obtained in the presence of metallic sodium, the percentage of the links in the same position attains 70. This polymer has a more simple chain structure, as compared to rubber obtained in the presence of metallic sodium. There are 2 figure, 1 table, and 8 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet (Leningrad State University)

SUBMITTED: December 3, 1957

KASATKINA, N.G.; KIRPICHEV, V.P.

Stabilization of polyacetaldehyde. Vest. LGU 18 no.10:143-147 '63. (MIRA 16:8)

(Acetaldehyde) (Antioxidants)

KASATKINA, N.G.; LAZAREVA, T.N.

Stabilization of polyacetaldehyde by the addition of urea, thiourea, polyamide. Vest. LGU 20 no.10:142-145 '65. (MIRA 18:7)

L 07895-66 EWT(m)/EWP(j) RM

ACCESSION NR: AP5017103 UR/0054/65/000/002/0142/0145

AUTHORS: Kasatkina, N. G.; Loskutova, T. N. 16 15

TITLE: Stabilization of polyacetaldehyde by addition of urea, thiourea, and polyamide

SOURCE: Leningrad. Universitet. Vestnik. Seriya fiziki i khimii, no. 2, 1965, 142-145

TOPIC TAGS: polymer, organic chemistry, polyacetaldehyde, urea, thiourea, polyamide

ABSTRACT: Stabilization of polyacetaldehyde with urea (I), thiourea, sodium bicarbonate, and polyamide (37% of adipic acid--hexamethylenediamine, remainder--caprolactam) has been studied. These compounds act by binding the secondary autooxidation products, acetaldehyde, and acetic acid, which otherwise cause acid hydrolysis of acetal bonds in the polymer. The stability of polyacetaldehyde was evaluated by determining its molecular weight and thermal stability. Addition of 4% of I (by weight) to the freshly prepared polymer-acetone solution, directly after removal of the catalyst, gave best results. In general, introduction of either of the above additives increased the thermal stability of the untreated

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L 00895-66

ACCESSION NR: AP5017103

polyacetaldehyde from 3 to 16 times. Orig. art. has: 2 tables.

ASSOCIATION: none

SUBMITTED: 10Nov64 ENCL: 00 SUB CODE: MT, GC

NO REF SOV: 001 OTHER: 005

Card 2/2

KASATKINA, N.G.; POZDYSHEVA, V.A.

Anomalous products of diallyl ozonolysis. Vest.LGU 20 no.22:150-153 '65. (MIRA 18:12)

SOKOLOVA, N.M.; KASATKINA, N.M.; SHCHUKAREVA, N.K.; LEVKOVICH, Yu.I.

Laboratory diagnosis of candidiasis in patients with malignant tumors. Vop. onk. 9 no.8:49-54 '63 (MIRA 17:4)

1. Iz kliniki-diagnosticheskoy laboratorii (zav. - dotsent I.F. Grekh) Instituta onkologii AMN SSSR (direktor- deystvitel'nyy chlen AMN SSSR prof. A.I. Serebrov. Adres avtorov: Leningrad, P-129, 2-ya Berezovaya alleya, 3, Institut onkologii AMN SSSR.

GLOZMAN, O.S.; KASATKINA, N.P.

Temporary union of two organisms as a method for experimental symbiotic therapy. Izd. AN Kazakh.SSR. Ser.Kraev.pat. no.6:91-107 '50. (MLRA 9:8)

(SYMBIOSIS) (APRABIOSIS)

KORCHUNOV, N.G., prof., red.; LEONT'YEV, S.I., red.; ISAYENKO, Ye.N., red.; RAKHMANKIN, S.G., red.; KASATKINA, N.P., red.

[Ways for the development of land transportation of lumber] Puti razvitiia sukhoputnogo transporta lesa; sbornik statei. Moskva, TSentr. nauchno-issl. in-t informatsii i tekhniko-ekon. issledovanii po lesnoi, tsellyulozno-bumazhnoi, derevoobrabatyvaiushchei promyshl. i lesnomu khoz., 1964. 168p. (MIRA 18:1)

1. Leningradskaya lesotekhnicheskaya akademiya im. S.M. Kirova (for Korchunov).

KASATKINA, N.V. (Izhevsk)

Integral ineqalities for multidimensional Volterra-type integral equations. Izv. vys. ucheb. zav.; mat. no.2:77-85 '65. (MIRA 18:5)

KASATKINA, O.I. (Golikova); KRASIL'SHCHIKOV, L.B.

Automatic exchange of filters when recording highly variable luminous fluxes. Trudy GOO no. 153:75-77 '64. (MIRA 17:9)

KASATKINA, O.I. (Golikova); KRASIL'SHCHIKOV, L.B.

Eliminating the effect of a variable light source in exact photometric measurements using an electronic potentiometer. Trudy GGO no. 153:78-79 '64. (MIRA 17:9)

L 3884-66 EWT(1)/FCC GW

ACCESSION NR: AT5025231 UR/2531/65/000/170/0105/0114 26 23 B+1

AUTHOR: Kasatkina, O. I.; Shifrin, K. S. 44,55 44,55

TITLE: The scattering indicatrix for light dispersed by a system of spherical particles

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 170, 1965. Issledovaniye radiatsionnykh protsessov v atmosfere (Investigation of radiation processes in the atmosphere), 105-114

TOPIC TAGS: light scattering, aerosol 12, 44,55

ABSTRACT: The authors consider the problem of determining the indicatrix for light scattering in a system of spherical particles, specifically in clouds and mists. The available data which are necessary for calculating these indicatrices are evaluated. Examples are given for calculation of the indicatrix of light scattering for an individual particle with an index of refraction $m = 1.335$ for $\rho = \frac{2\pi r}{\lambda} = 59, 60$ and 61, where r is the radius of the particle. Calculation and analysis shows that the data necessary for calculating the indicatrix of light scattering in aerosol

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L 3884-66

ACCESSION NR: AT5025231

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systems must be obtained experimentally. Orig. art. has: 5 figures, 9 formulas, 3 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory) 14,55

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, OP

NO REF SOV: 002 OTHER: 008

BVK

Card 2/2

L 3885-66 EWT(1)/FCC GW

ACCESSION NR: AT5025232 UR/2531/65/000/170/0122/0126 39 34 B+1

AUTHOR: Krasil'shchikov, L. B.; Kasatkina, O. I. 44,55 44,55

TITLE: A recording goniophotometer for measuring spectral coefficients of brightness

SOURCE: Leningrad. Glavnaya geofizicheskaya observatoriya. Trudy, no. 170, 1965. Issledovaniye radiatsionnykh protsessov v atmosfere (Investigation of radiation processes in the atmosphere), 122-126

TOPIC TAGS: goniophotometer 12,44,55, photometer, photometric analysis, light reflection 12,44,55

ABSTRACT: A recording goniophotometer is described for measuring the spectral coefficients of brightness from various surfaces at various angles of illumination. A schematic diagram of the installation is shown in fig. 1 of the Enclosure. The light source is a projector with an incandescent bulb which has a conical filament so that the light spot on the specimen is a true disc. The light reflected from the specimen or reference falls directly on the input slit of a double monochromator which is mounted on a dolly and can be moved along the arc of a circle around the specimen which is located in the plane passing through the center of this circle.

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